

WHAT IS CLAIMED :

1. A three dimensional 3D display apparatus of the integral photography type comprising a passive first array of points and a second array representing an image to be displayed, this second array comprising a set of subarrays, each subarray being associated with a corresponding point of the passive first array, and each point of each subarray containing an information about a point of the 3D image to be displayed, a light ray from a point of a subarray to the associated point of the passive array virtually converging to the corresponding point of the 3D image to be displayed, said 3D apparatus comprising means for controlling the position of the 3D image with respect to the first and second arrays through the control of the direction of said light rays.

2. A 3D display apparatus according to claim 1, characterized in that it comprises means for controlling the distance between the passive first array and the second array.

3. A 3D display apparatus according to claim 2, characterized in that the passive first array is moveable and the second array is stationary.

4. A 3D display apparatus according to claim 1, characterized in that it comprises a manual controller for controlling the position of the 3D image.

5. A 3D display according to claim characterized in that it comprises means for controlling the position of each point of the passive first array and/or each point of the second array.

6. A 3D display according to claim 5 characterized in that said means for controlling the position of each point control the distance of the reproduced object to the arrays.

7. A 3D display according to claim 5 characterized in that said means for controlling the position of each point control the position of the reproduced object in a direction parallel to the surface of the array representing the object.

8. A 3D display apparatus according to claim 1, characterized in that it comprises means for controlling the position of the 3D image in view of the position of the viewer.

9. A 3D display apparatus according to claim 8, characterized in that it comprises sensor means for detecting the position of the eyes of the viewer.

10. A 3D display apparatus according to claim 1, characterized in that the second array is a flat surface display, such as a liquid crystal display.

11. A 3D display apparatus according to claim 1, characterized in that each point of the passive first array is an aperture of a plate, or a lens.